

Rec'd PCT/PTO 12 JAN 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
22 January 2004 (22.01.2004)

PCT

(10) International Publication Number  
**WO 2004/007350 A1**

- (51) International Patent Classification<sup>7</sup>: **B82B 3/00** Apt., 152-1, Sinseong-Dong, Yuseong-Gu, Daejeon 305-720 (KR).
- (21) International Application Number: PCT/KR2003/001354 (74) Agent: CHUNG-UN PATENT & LAW FIRM; 6th Fl., Changsang Bldg., 1543-12, Seocho 3-dong, Seocho-gu, Seoul 137-872 (KR).
- (22) International Filing Date: 8 July 2003 (08.07.2003)
- (25) Filing Language: English (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (26) Publication Language: English (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (30) Priority Data: 10-2002-0041376 15 July 2002 (15.07.2002) KR
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- Published:  
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR PREPARING FINE METAL OXIDE PARTICLES

(57) Abstract: Disclosed is a process for preparing fine metal oxide particles, comprising the following steps of reacting a reactant mixture comprising i) water, ii) at least one water-soluble metal nitrate and iii) ammonia or ammonium salt at 250-700 °C under 180-550 bar for 0.01 sec to 10 min in a reaction zone to synthesize the metal oxide particles, the metal nitrate being contained at an amount of 0.01-20 wt % in the reactant mixture; and separating and recovering the metal oxide particles from the resulting reaction products. According to the present invention, nano-sized metal oxide particles are synthesized, while the harmful by-products generated concurrently therewith are effectively decomposed in the same reactor.

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